CORRESPONDENCE

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MALE STERILIZATION AND SPERMATOGENESIS

To the Editor, The Eugenics Review

Sir,—Growing interest in vasectomy as a method of birth control and population limitation has been displayed in many countries in recent years, and these include both advanced and backward peoples. In India the total of surgical sterilizations between 1956 and 1960 numbered 117,195, of which about 37 per cent concerned vasectomies.[1] Figures for 1960 moreover were incomplete. It is stated that the Population Council of India has decided to set up units all over India for the promotion of surgical birth control.[2] In this country there are signs of a change in medico legal opinion regarding the legality of voluntary sterilization,[3] and in the U.S.A. there is evidence that resort to vasectomy as a method of birth control by normal people who find standard contraceptive methods unreliable or aesthetically repugnant is increasing.[4] The objection by the Brock Departmental Committee on Sterilization which reported in 1933 that vasectomy is inadmissible for normal people because it is irrevocable has been shown largely invalid by reason of the fact that information collected in the U.S.A. by O'Conor from 750 urologists before 1948 showed that success in recanalizing operations had succeeded in 45·5 per cent of the cases.[5] The rate of success could doubtless be much improved if the initial operation were always performed so as to conserve tissue and avoid excision too near to the epididymis as O'Conor and Schmidt have pointed out. In a recent small series Roland reports success in 77 per cent of his cases.[6]

In these circumstances, in order that a correct evaluation of vasectomy should be reached, it is clearly important to know what its effects are. According to some opinions the occlusion of the vasa brings about a degeneration of the germinal tissues responsible for spermatogenesis. In your columns it has been stated that it is commonly believed that an atrophy of the spermatogenic cells of the testis is caused when the distal (testicular) end of the duct is tied.[7] If this were true the possibility of recanalization would have little relevance to the matter of a restoration of free fertility. But there is much evidence to show that occlusion of the seminal ducts can be prolonged indefinitely with no adverse effect on spermatogenesis. In a case reported by Professor Harmsen[8] a man whose spermatic ducts were resutured nine years after sterilization afterwards fathered four children. One of O'Conor's successful cases had had the operation eighteen years before and normal spermatozoa were observed by Dorsey thirteen years following vasectomy.[9] This surgeon reported 80 per cent success in reversing operations. Yet more significantly Bayle[10] found numerous spermatozoa in three patients with congenital absence of the vas deferens. Hanley treated a man suffering from sterility, who had no palpable vasa, by constructing an artificial cyst to retain his sperms and succeeded in producing pregnancy from these by A.I.H. This same urologist stated that he had seen well over a hundred azoospermic male patients with proven actively motile spermatozoa in the tubules of the epididymal head and that in the majority of these cases the azoospermia appeared to be due to a failure of conduction through the tail of the epididymis and the vas.[11] It appears that the illusion that vasectomy impairs spermatogenesis was largely due to Steinach, who in the twenties and early thirties of this century popularized resection and ligation of the vasa as an alleged means of rejuvenation, a claim which has since been generally discredited. Steinach's claims were based on his unproven assertion that when the sperms were held back in the epididymis and testis, this caused degeneration of the germinal epithelium and the hypertrophy of the interstitial cells responsible for the production of androgenic hormones. According to Rosembloom, normal testes continue to produce spermatozoa for an indefinite number of years after vasoligation.[12]

Thus it appears that there is good reason for regarding sterilization as the result of vasectomy or vasoligation as due to the action of a simple

mechanical block, which may be capable of removal, and not to any destruction of germinal tissue resulting in an impairment of spermatogenesis. From a medico-legal as well as a therapeutic viewpoint this is important. For as Dr. Glanville Williams observes in *Sanctity of Life and the Criminal Law*, the fact that a vasectomy operation may be reversed means that were there a prosecution instituted on the grounds that it constituted a maim or mayhem, in spite of being voluntarily sought, this would surely fail, since a maim as generally understood, in contrast to a wound, is permanent.

In the light of these facts, I suggest that the viewpoint advanced by the late Havelock Ellis in *Sex and Marriage* that voluntary male sterilization can play an immensely beneficial part as a method of family regulation, for normal as well as abnormal people deserves reconsideration. Such a development would work far more eugenically than orthodox contraception, because it is completely foolproof and not dependent on a high degree of intelligence and circumspection in order to be effective. Ordinary methods of contraception place a premium on the multiplication of the stupid, ignorant and feckless, but not so vasectomy which is as effective as foolproof.

HERBERT BREWER

31 Mundon Road,
Maldon, Essex

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CANCER AS A CAUSE OF DEATH

To the Editor, The Eugenics Review

Sir,—As part of a study on cancer rates in ageing twins, we had occasion to examine cancer mortality statistics for the United States, and this leads us to comment on the statement made by Sir Robert Platt, that "... the curve of cancer incidence shows that it gets commoner the older you get, though of course people get rarer, and statistical allowances have to be made for that fact but if we all lived to be 100 or more, our chances of dying of cancer would probably be very high indeed."*

In the United States cancer, as a cause of death after age 60, appears to *decrease* rather than increase with advancing years. In New York State for example 21·2 per cent of all male deaths between the ages of 60 and 69 were due to cancer (malignant neoplastic disease), while the corresponding percentages were 17·9 and 10·4 for the age groups 70-79 and over 80 years, respectively. Likewise, the female rates declined from 25·2 per cent (60-69 years) to 15·5 per cent (70-79 years) and 8·1 per cent (80 years and over). These figures are based upon U.S. Vital Statistics for 1958 and a similar trend was recorded for earlier census years. Thus, if we lived to be 100 or more our chances of dying of cancer would not be as high as they were at the age of 60, at least in the United States.

LISSY F. JARVIK
PH.D., M.D.
ARTHUR FALEK
PH.D.

Department of Medical Genetics,
Columbia University
New York State Psychiatric Institute,
722 West 168th Street, New York, 32

SIR ROBERT PLATT writes:

That the death rate from cancer per million persons rises with age is undoubted and is clearly shown in the paper by Armitage and Doll which I quoted in my lecture. But this is different from the percentage of all deaths which is what Jarvik and Falek are quoting.

A simple and purely hypothetical case will make this clear. Suppose that in a community there are 1,000 men aged fifty and that in twelve months twenty have died, ten of them from cancer. The liklihood of a *man* of this age dying from cancer is then 1 per cent, and the pro-

* THE EUGENICS REVIEW, July 1961. **53**, 85.